

## Six New Species of *Glyphipterix* HÜBNER (Lepidoptera, *Glyphipterigidae*) from Thailand<sup>1,2)</sup>

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In Thailand the Glyphipterigid genus *Glyphipterix* has hitherto been represented by a single species, *G. ditiorana* (WALKER) (DIAKONOFF, 1982). During my stay in Thailand to make investigations on the Lepidoptera, I collected 15 specimens belonging to the genus *Glyphipterix*. Having examined them, I have found that nine of them are grouped into six unnamed species, which are described below as new to science; the remaining six specimens need to be further studied for specific identification.

Holotypes of the new Thai species described in this paper are all preserved in the collection of Entomological Laboratory, University of Osaka Prefecture, Sakai, and the paratypes are deposited in the Entomological Laboratory, University of Osaka Prefecture and the Entomology and Zoology, Department of Agriculture, Bangkok.

I wish to express my cordial thanks to Dr. S. MORIUTI, University of Osaka Prefecture, for his kindness in correcting the manuscript. Thanks are also due to Dr. T. WONGSIRI, Mr. M. RUMAKON and Dr. A. LEVVANICH, Department of Agriculture, for their kind help during my field survey in Thailand. I am indebted to Mr. S. HONMA for the drawing of the figures in this paper.

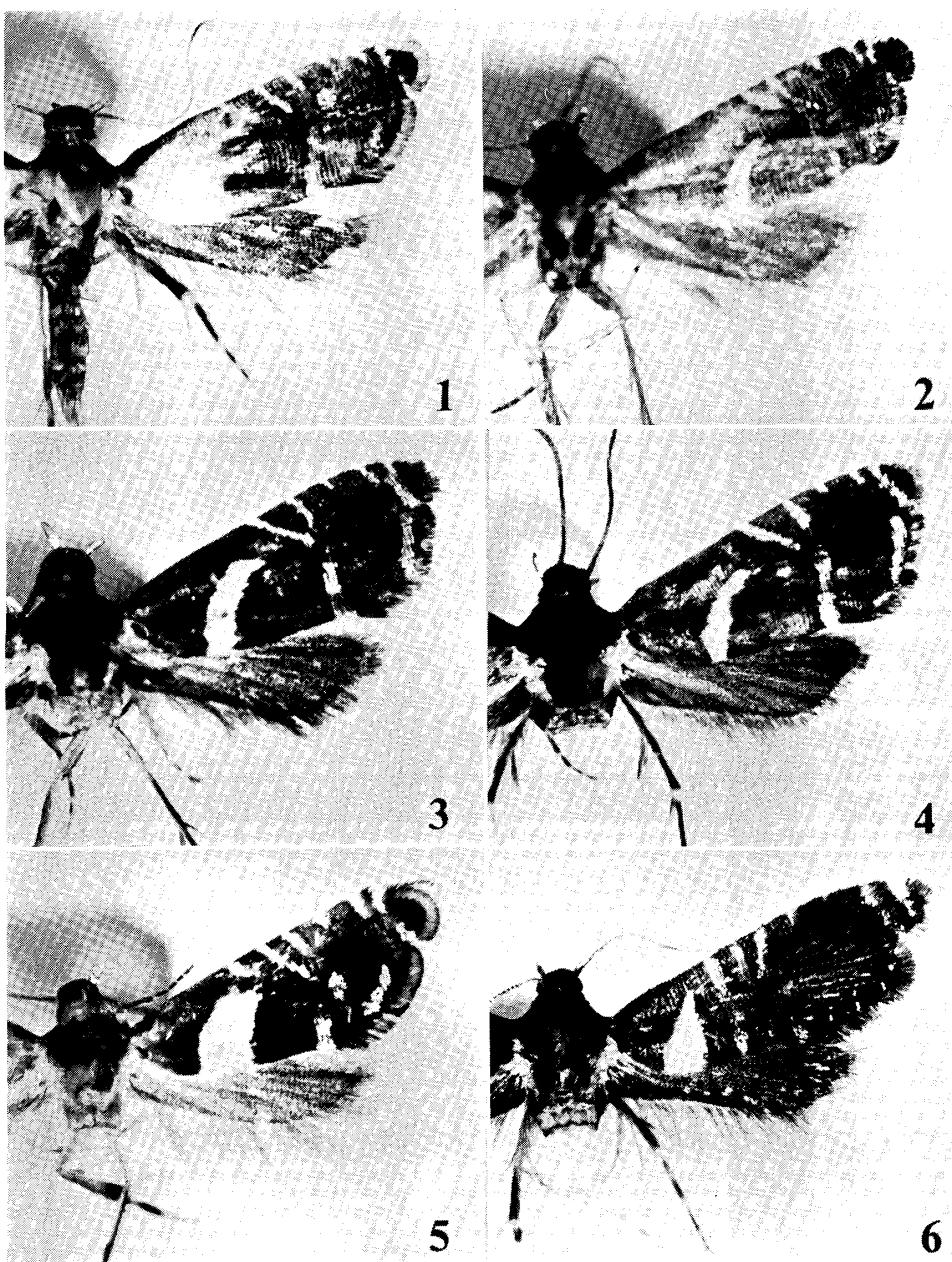
### *Glyphipterix argyrea* n. sp.

(Figs. 1, 7 and 8)

♂. 7.5–9 mm. Head glossy grey-fuscous. Antenna dark-grey. Palpus slightly compressed dorso-ventrally, moderately curved; sordid white, the outer side being dark brown on basal half of middle segment and on terminal segment. Thorax glossy dark grey. Abdomen grey-fuscous, with segmental margins greyish. Fore wing moderately narrow, a little dilated; costa gently arched, and rather straight in middle; apex rounded; termen convex, indented below apex; basal 1/3 glossy grey, with costal part grey-fuscous; posterior 2/3 glossy dark brown; six short white streaks from costa, margined with blackish-brown posteriorly; the second, third and sixth streaks terminating in a leaden-metallic spot or short line, and the fifth and sixth approximated together and longer than the others; a rounded metallic spot in disc beyond middle, and around of this spot suffused with orange scales; a short leaden-metallic streak on dorsum before tornus; a short leaden-metallic streak on termen; a small leaden-metallic dot on termen beneath apex; cilia greyish, with a dark fuscous median line; basal half fuscous. Hind wing greyish fuscous; cilia grey.

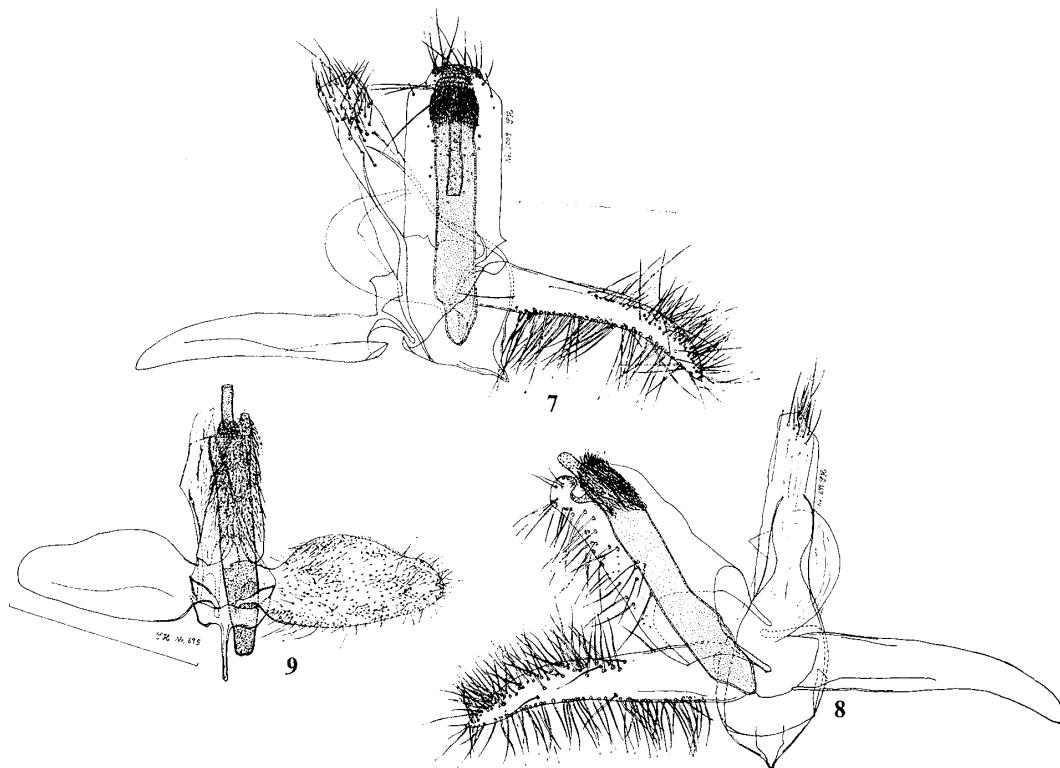
<sup>1)</sup> Scientific Results of the Lepidopterological Expedition to Thailand, No. 7.

<sup>2)</sup> This work is supported by the Grants-in-aid for Overseas Scientific Research (Nos. 56041051 and 57043046) from the Ministry of Education, Science and Culture, Japan.



Figs. 1-6. *Glyptapterix* spp., right wings. 1: *G. argyrea* n. sp., ♂, holotype. 2: *G. siamensis* n. sp., ♂, holotype. 3: *G. purpurea* n. sp., ♂, holotype. 4: *G. silvestris* n. sp., ♂, holotype. 5: *G. moriutii* n. sp., ♀, holotype. 6: *G. angoonae* n. sp., ♀, holotype.

Male genitalia (Figs. 7 and 8). Tegumen slender, with upper half cylindrical. Tuba analis rather long, with bristles in upper part. Vinculum wide. Saccus very short, sharp. Valva narrow, tapering to rounded apex, and clothed with long bristles along dorsum and posterior half; apical part of valva gently curved ventrally. Aedeagus as long as valva, nearly parallel-sided, set with hair at about apical 1/4. Cornutus slender, spindle-shaped, the apical 1/3 with denticles. Anellus large and broad, with parallel sides; ventral surface with long bristles in median part; apical part hook-shaped in lateral view, the top being denticulate inside.



Figs. 7-9. *Glyphipterix* spp., male genitalia. 7: *G. argyrea* n. sp., holotype. 8: Do, paratype. 9: *G. siamensis* n. sp., holotype. (Lines next to figures all refer to 0.5 mm).

♀. Unknown.

Holotype: ♂, Thailand, Chiang Mai, Mae-sa, 26. VII. 1981 (KUROKO, MORIUTI, ARITA & YOSHIYASU), genitalia slide no. 1009 YA.

Paratype: 1 ♂, same data as holotype, genitalia slide no. 699 YA.

Remarks: This distinct species is characterized by the glossy grey basal 1/3 of fore wing, and by the peculiar characters of male genitalia.

#### *Glyphipterix siamensis* n. sp.

(Figs. 2, 9 and 12)

♂♀. 7.5-8 mm. Head glossy grey-fuscous. Antenna greyish brown. Palpus very compressed dorso-ventrally, gently curved; dirty white; middle segment with broad brown subbasal and subapical bands; terminal segment with broad brown basal, median and apical bands. Thorax glossy grey-fuscous. Fore wing rather narrow; costa almost straight; apex rounded; termen oblique, indented below apex; basal half greyish-fuscous, and posterior half greyish brown; a snow-white curved streak from dorsum before middle, tapering, reaching 2/3 across wing; five white streaks from costa, obscurely margined anteriorly with brown, the posteroir four streaks being terminating in a leaden-metallic spot, dot or short line; the first streak from middle of costa, the second streak a little beyond middle of costa, the third streak shortest, and the fourth and fifth streaks approximated; a rather long leaden-metallic streak on dorsum before

tornus, white on dorsum; a short leaden-metallic streak on termen; a small leaden-metallic dot on termen below apex; cilia grey, with a dark fuscous median line; basal half fuscous; tips of cilia above apex with a fuscous hook. Hind wing greyish fuscous; cilia grey.

Male genitalia (Fig. 9). Tegumen+vinculum moderate, narrowed, concave at middle. Saccus long, slender. Valva suboval, rather broad, and clothed with fine hairs throughout; costa strongly arched; apex rounded; sacculus curved. Aedeagus thick, broadest at top, with dense recurved spines. Cornutus long, tubular, set with dense, short spines. Anellus large elongate-triangular, as long as valva, densely haired.

Female genitalia (Fig. 12). Papillae anales short, broad, extensile. Both apophyses very long and slender. Seventh abdominal segment rather enlarged. Ostium bursae wide, membranous, elongate-funnelled. Ductus bursae rather wide posteriorly. Corpus bursae transformed, without signum.

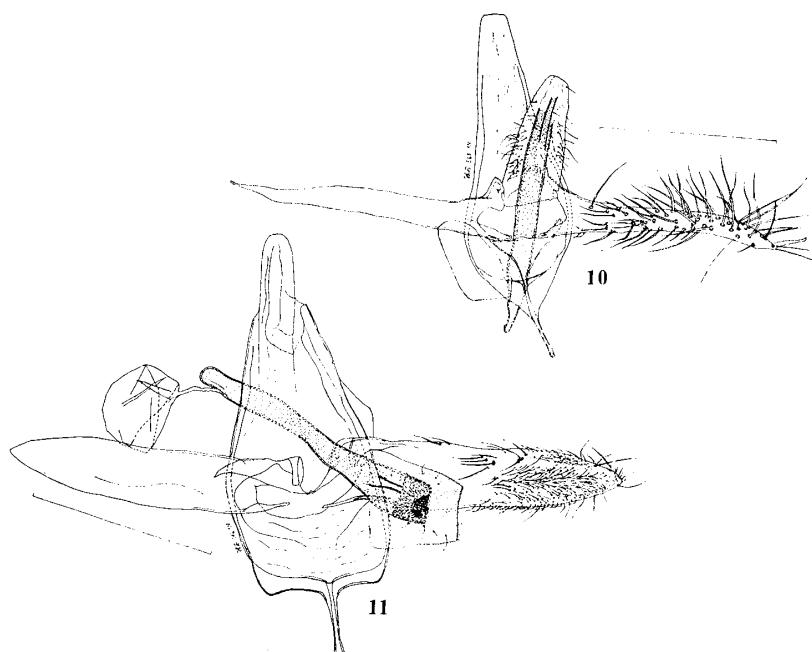
Holotype: ♂, Thailand, Chantaburi, Plew Chantaburi, 16. VIII. 1981, emerged 2. IX. 1981 (KUROKO, MORIUTI, ARITA & YOSHIYASU), reared from larvae on *Scleria* sp. genitalia slide no. 695 YA.

Paratypes: 2 ♀, same data as holotype, genitalia slides no. 696 YA and 698 YA.

Host plant: *Scleria* sp. (Cyperaceae).

Ecological notes: The larva lives on seeds and seed axes of a silken webbing, pupating in a silken cocoon with some seeds, seed axes and faeces gathered.

Remarks: This typical species is rather similar to *G. purpurea* n. sp. and *G. silvestris* n. sp., but differs from them in the smaller size and in the fore wing with the metallic streaks being not shining violet. In the male genitalia the three species are quite different from one another.



Figs. 10-11. *Glyphipterix* spp., male genitalia. 10: *G. purpurea* n. sp., holotype. 11: *G. silvestris* n. sp., holotype. (Lines next to figures all refer to 0.5 mm).

*Glyphipterix purpurea* n. sp.

(Figs. 3 and 10)

♂. 9 mm. Head and antenna glossy grey-fuscous. Palpus compressed dorso-ventrally, moderately curved; white; middle segment grey-fuscous outside on dorso-distal area; terminal segment grey-fuscous outside. Thorax glossy grey-fuscous. Fore wing moderately narrow, a little dilated; costa straight; apex rounded; termen gently sinuate, indent below apex; basal half glossy grey-fuscous, and distal half glossy dark brown; a gently curved white streak from dorsum before 1/3, broadening upwards and tapering apically, and reaching 2/3 across wing; five short, slender white streaks from costa, terminating in brilliant violet-metallic short or long lines except for the shortest middle streak; a small brilliant violet-metallic spot in disc at middle; a long brilliant violet-metallic streak on dorsum before tornus; a moderately brilliant violet-metallic streak on termen; a leaden-metallic dot on termen below apex connected to apical white streak; cilia (imperfect) with basal half dark brown. Hind wing greyish-fuscous; cilia grey.

Male genitalia (Fig. 10). Tegumen+vinculum pear-shaped, rather sunken. Vinculum twice as broad as length; saccus slender, longer than vinculum. Tuba analis short and broad. Valva very long, narrow, rather shorter than the combined length of tegumen, vinculum and saccus, narrowed distally, and clothed with long bristles throughout; cucullus rather long, with top very slightly clavate. Aedeagus moderate, longer than valva; cornutus a slender tube. Anellus large, broad, about half the length of valva, and sparsely haired.

♀. Unknown.

Holotype: ♂, Thailand, Nakorn Nayok, Kao Yai, 26. VIII. 1981 (KUROKO, MORIUTI, ARITA & YOSHIYASU), genitalia slide no. 697 YA.

Remarks: This brilliantly marked species resembles *G. silvestris* n. sp., but it is smaller, with the white dorsal streak of fore wing gently curved instead of uneven curve.

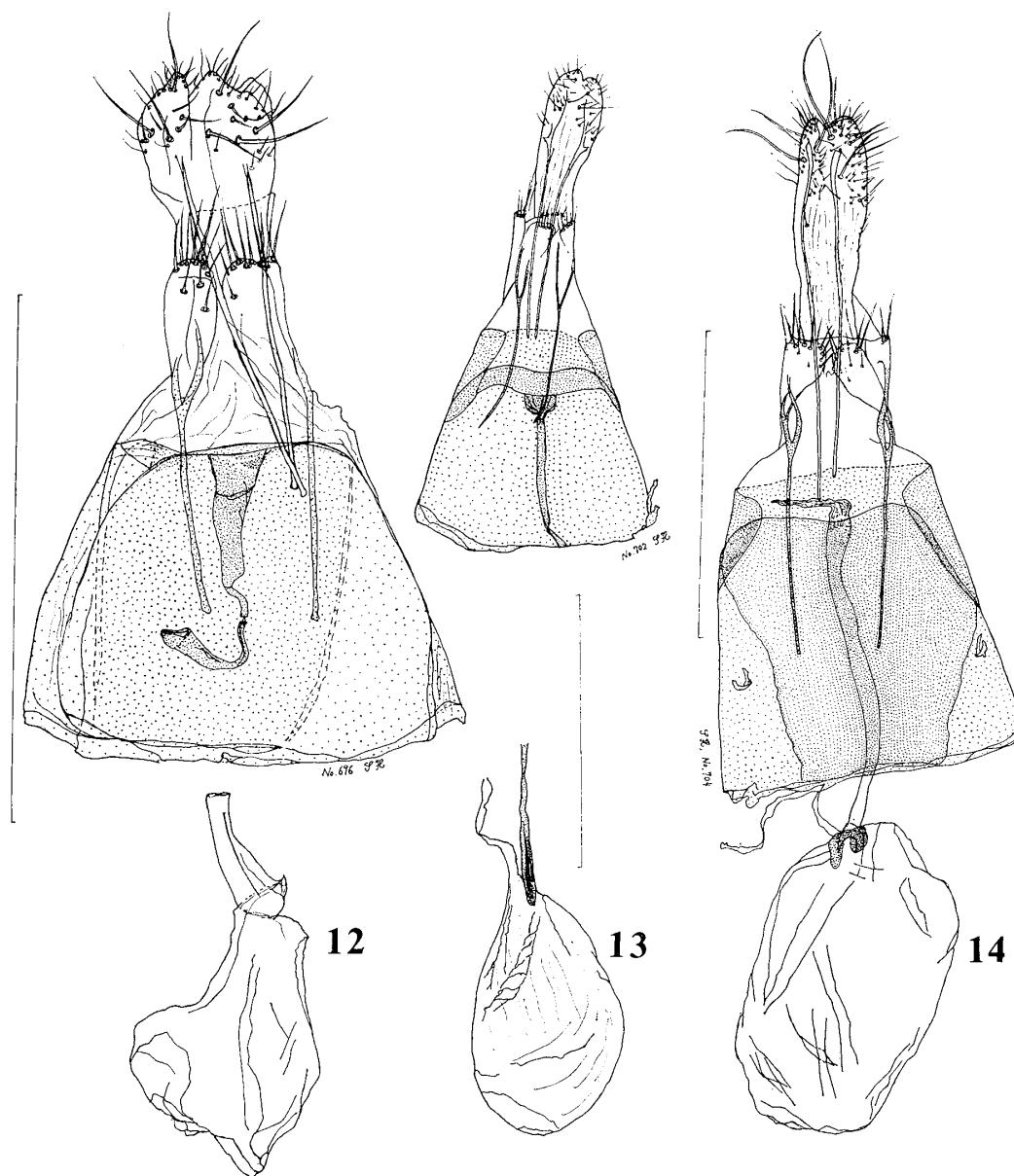
*Glyphipterix silvestris* n. sp.

(Figs. 4 and 11)

♂. 10.5 mm. Head glossy grey-fuscous. Antenna dark brown. Palpus flattened dorso-ventrally, bended; white; middle segment brownish-fuscous outside on dorso-distal area; terminal segment brownish-fuscous except on inner side. Thorax brownish-fuscous. Fore wing moderately broad, a little dilated; costa almost straight; apex gently rounded; termen a little curved, indent below apex; brownish-fuscous; apex and preapical disc dark brown; a moderate, somewhat rugged white streak from dorsum before 1/3, reaching 2/3 across wing; a long brilliant violet-metallic streak on dorsum before tornus, reaching 2/3 across wing; a small brilliant violet-metallic spot in disc, situated midway between apex of white dorsal streak and apex of metallic dorsal streak; five small white streak from costa, terminating in brilliant violet-metallic short or long line except for the smallest middle streak; both first and second streaks with a very long oblique metallic line, and the fourth streak short; a long curved brilliant violet-metallic streak along termen; a brilliant violet-metallic streak from fifth

white streak reaching to below apex white dot; cilia (imperfect) with basal half brownish-fuscous; a white indent on termen below apex. Hind wing greyish-fuscous; cilia grey, with darker basal half.

Male genitalia (Fig. 11). Tegumen moderately broad, with top truncate. Tuba analis short. Vinculum about half broader than length, with antero-lateral angles weakly projected; saccus moderate long, a little clavate. Valva long, narrow, about as long as the length of tegumen+vinculum, and moderately bristled in posterior half. Aedeagus long, a little shorter than valva, the apical half being gradually delated; apical part with dense, short crochets. Anellus wide, trapezoid; apical half with short and thin hairs.



Figs. 12-14. *Glyphipterix* spp., female genitalia. 12: *G. siamensis* n. sp., paratype.

13: *G. moriutii* n. sp., holotype. 14: *G. angoonae* n. sp., holotype. (Lines next to figures all refer to 1 mm).

♀. Unknown.

Holotype: ♂, Thailand, Chantaburi, Kaosoi Dao, 14. VIII. 1981 (KUROKO, MORIUTI, ARITA & YOSHIYASU), genitalia slide no. 701 YA.

Remarks: This glittering species is closely allied to *G. purpurea* n. sp.; the discriminating characters have been mentioned in the remarks of the latter.

***Glyphipterix moriutii* n. sp.**

(Figs. 5 and 12)

♀. 10 mm. Head, antenna and thorax grey-fuscous. Palpus compressed dorso-ventrally, moderate; sordid white, with both middle and terminal segments brownish-fuscous laterally except in median portion. Fore wing moderately broad, dilated; costa straight posteriorly; apex rounded; termen gently curved, indent below apex; brownish-fuscous; costal 1/3 across wing grey-fuscous; a long, oblong snow-white streak from dorsum before middle, with convex inner margin; six short white streaks from costa; the second, fourth and fifth streaks terminating in small brilliant violet-metallic dot or long lines, and the apical two streaks approximated together; a small brilliant violet-metallic spot in disc at middle; a short brilliant violet-metallic streak on dorsum before tornus; a long curved metallic streak on lower half of termen; a very short brilliant violet streak on termen below apex; cilia grey, with a dark fuscous median line; basal half greyish-fuscous; tips of cilia above apex with a fuscous hook. Hind wing greyish-fuscous; cilia grey.

Female genitalia (Fig. 13). Papillae anales slender, with top rounded. Both apophyses long and slender. Seventh abdomianl segment a little extended. Ostium bursae small, cup-shaped. Ductus bursae narrow, sclerotized. Corpus bursae ovoid, without signum.

Holotype: ♀, Thailand, Chiang Mai, Doi Sutep, 22. VII. 1981 (KUROKO, MORIUTI, ARITA & YOSHIYASU), genitalia slide no. 702 YA.

♂. Unknown.

Remarks: The very striking oblong snow-white streak from dorsum on the fore wing separates this new species from the other *Glyphipterix* species.

The name of this new species is deticated to Dr. S. MORIUTI.

***Glyphipterix angoonae* n. sp.**

(Figs. 6 and 14)

♀. 12.5 mm. Head glossy fuscous. Antenna dark fuscous above, banded with white, and white below. Palpus moderately curved, flattened dorso-ventrally; white; middle segment with oblique dark fuscous median and subapical bands; terminal segment dark fuscous, with narrow white median band. Thorax glossy grey-fuscous. Fore wing rather narrow; costa almost straight, and moderately curved posteriorly; apex rounded, termen rounded, indent below apex; dark fuscous, sprinkled with creamy-yellow scales distally; a broad lanceolate lemon-yellow blotch on dorsum at 1/4, nearly reaching costa; a short white streak on costa before apex, terminating in leaden-metallic line which reaches termen below apex; five short creamy-yellow streaks from costa; the first streak terminating in a long leaden-metallic line which reaches

to before middle of dorsum, the second and fourth streaks without metallic line, the third streak terminating in a rather short leaden-metallic line, and the fifth streak terminating in a long leaden-metallic line which arrives termen at just below apex; a large irregular black blotch along termen to tornus, limited by a leaden-metallic dot on tornus, and containing four dots of the same colour; above this black blotch with a series of golden-yellow scales across wing, becoming scarce above; cilia grey, with basal half grey-fuscous. Hind wing greyish-fuscous; cilia grey.

Female genitalia (Fig. 14). Papillae anales rather slender. Both apophyses very long and slender. Seventh abdominal segment enlarged widely. Ostium bursae membranous, elongated. Ductus bursae moderately narrow. Corpus burase oblong, the base with a signum, which bears an articulate projection at each side.

♂. Unknown.

Holotype: ♀, Thailand, Chiang Mai, Doi Sutep, 22. VII. 1981 (KUROKO, MORIUTI, ARITA & YOSHIYASU), genitalia slide no. 704 YA.

Remarks: This characteristic species with a lemon-yellow blotch on 1/4 of dorsum of fore wing is somewhat similar to *G. carenota* MEYRICK and *G. synarma* MEYRICK, both occurring in Khasi Hills, Assam, and *G. luteomaculata* ARITA in Ishigaki Is., the Ryukyus, but the blotch is narrower and more curved at the base.

I have the pleasure in naming this specific name after Dr. Angoon LEWVANICH, a Thai lepidopterist.

### References

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### 摘要

タイ国産 *Glyphipterix* 属 (鱗翅目: ホソハマキモドキガ科) の 6 新種 (有田 豊)

タイ国からホソハマキモドキガ科の *Glyphipterix* 属は, *Glyphipterix ditiorana* (WALKER) 1 種が記録されていたが, 今回この属の次の 6 新種を記載した.

*Glyphipterix argyrea* ARITA

*Glyphipterix siamensis* ARITA

*Glyphipterix purpurea* ARITA

*Glyphipterix silvestris* ARITA

*Glyphipterix moriutii* ARITA

*Glyphipterix angoonae* ARITA